CHANGES IN LEFT- AND RIGHT-BRANCHING SENTENCE EMBEDDING IN ADULTS

by

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sources reproduced in the appendixes appear with the permission of the Kansas State Historical Society.

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CHAPTER I

INTRODUCTION

Older adults make up the fastest-growing portion of the population of the United States. This increasing "greying" of our society has led to an emphasis on the responsibilities of institutions toward the elderly. Health and social programs have been developed for "senior citizens". Special political activities such as silver-haired legislatures have come into being to air the needs, interests and concerns of our older citizens.

Interest in the cognitive processes of the older adult is evidenced by articles in the popular press, e.g., (Goleman, 1987) and (Johannes, 1987). Aging individuals want to understand how they are changing and they want help in dealing with change be it physical or mental. Facilitating learning, no matter what age the learner, is the responsibility of educators.

Educational institutions are expressing an awareness of their responsibilities to provide older citizens with the skills and information to continue to function independently. Education is being seen not as something one completes, but as something always being acquired. Peterson (1983) points out that older people will almost certainly increase as a percentage of the population with which educators will be dealing in a direct way. He also suggests that the interests and needs of these older students may differ widely.

"For instance, they may participate in adult basic education, upgrading of job skills, retraining for second careers, group discussion for volunteer roles, development of leisure skills, development of

health and consumer skills, or training for new roles or responsibilities" (Peterson, 1983, p. 9).

Even as the nature of those to be educated is changing so too are the means of acquiring education. Programs educational in nature that speak to the needs of older people can be found in activities ranging from extension service groups to church groups to garden clubs and historical societies. Videotapes that explain a hobby or recreational activity are part of this shifting vision of education.

But whether the older learner is participating in an institutionally sponsored educational program or learning at home from a book, video cassette tape or by some other means, to be effective the educational effort must recognize the unique needs, problems and requirements of the older learner.

Statement of the Problem

Based on the evidence of limited studies of the spoken and written language of adults mentioned, this study attempts to determine if changes occur in the writing of adults because of the aging process.

The following research questions provide direction for the study:

1. Does sentence complexity as measured by left- and right-branching sentence embeddings change with age?
2. To what extent is sentence length related to the age of the writer?
3. What relationship exists between sentence complexity as measured by the frequency left- and right-branching sentences embeddings and the educational level attained by the writer?
4. What is the relationship between mean sentence length and the educational level attained by the writer?
5. Are any other characteristics present in the writing that may have a relationship to syntactical complexity?

If there is evidence that as adults age, cognitive processes change in ways that influence learning, then educators must be aware of these changes and adjust their methods and materials accordingly.

Evidence presented by Emery (1985) and Kemper (1987) indicates that older adults may have difficulty processing complex sentences. It appears that in many individuals ability to imitate, create, or understand sentences containing certain kinds of embedded elements diminishes with age. Difficulties in dealing with syntactic complexity could pose problems for older learners in both expression and comprehension. Educators who work with older adults will need an understanding of these difficulties if they are to be effective in dealing with the older learner. The purpose of this study is to further examine the relationship between certain kinds of sentence complexity and aging in adults.

CHAPTER II

REVIEW OF THE LITERATURE

Although there has been research on intelligence and cognitive function as they relate to aging, according to Emery (1985) systematic studies of language structure/function in the elderly are almost non-existent.

Emery's research investigated language changes in both the normal elderly and the elderly suffering from Senile Dementia Alzheimer's Type. Emery notes, as did this researcher, that little attention has been given to language in the elderly as evidenced by the absence of "language" or "syntax" in compendia indexes of books dealing with cognitive processes and aging.

Emery's work (1985) marked an increasing awareness of the need to examine the relationship between aging and language. That research is based upon the work of linguists and psychologists who have demonstrated that language acquisition is developmental in nature. In childhood the use of nouns, verbs, and adjectivies, first as individual words and later as simple sentences, are the initial stages. As language development occurs, articles, conjunctions, prepositions and endings which show relationships within the sentences are acquired.

Building upon earlier research in linguistics which indicates that complex sentences are mastered later than simple sentences and that the mastery is directly related to syntactic function, Emery reported

significant changes were more likely to occur at the syntactic level rather than at the level of the individual word.

It was already established that some psychomotor slowing occurs with age. Many researchers also suggested a gradual decrease in cognitive abilities with age. Emery cites early research indicating that most of the decrease in language processing ability occurred after the age of eighty. Emery also concludes that although the normal elderly do have a definite sequence of deficits in the handling of complex syntactic structures, it is not so severe as victims of Alzheimer's dementia. Problems in processing syntax are a function of syntactic complexity (p. 12). "Systematic syntactic testing of the Alzheimer elderly and normal elderly had not been done prior to the research of Emery. . ." (p. 7).

Emery (1985) and Cross (1981) cite difficulties with cross-sectional studies as well as longitudinal studies to measure changes in language (Emery) or intelligence (Cross). The problems of each sort of study are known to researchers. The major researchers cited in this study Emery (1985) and Kemper (1987) attempted to control for the problems by various methods. In the cross-sectional study of Emery the cohort group was tightly controlled with regard to socio-economic background which might influence language. Kemper (1987) used a cohort-sequential design to deal with cultural changes over time.

Sprott (1980) surveyed the complexity of issues surrounding the measurement of learning ability and intelligence among older adults. It is difficult to separate issues of general intelligence in the elderly from their ability to process language.

Among the instruments specifically developed to test for syntactic complexity in language was the test for syntactic complexity based upon a number of other accepted instruments. Other tests based on research in transformational grammar and neurology were also utilized (Emery, 1985).

None of these tests was developed especially for written language and Emery's work deals primarily with spoken language. However, "All the data analyses and statistical tests point consistently to the idea of an age function in diminished syntactic performance" (p. 22). Furthermore, "The data seem to indicate an inverse relationship between the sequence of language development and the sequence of language deterioration" (p. 26).

The decrement in syntactic processing found by Emery as a function of age and of syntactic complexity was also found in the speech of elderly adults by Kynette and Kemper (1986).

Additional studies by Kemper (1986), Kemper & Rash (1987), and Kemper (1987), indicate deterioration in syntactic processing in the written work of adults as a function of age with the most evident change coming at around the age of seventy.

Kemper and Rash (1987) examined the complexity of both written and oral narratives and have determined a decline in syntactic complexity occurs in either case. These changes appear unrelated to the subject being discussed or the manner of presentation and probably reflect changes in fundamental psycholinguistic processes.

Kemper demonstrates that changes in syntactic complexity in writing found in diaries kept over a lifespan are a function of age and are decremental in nature, (Kemper, 1987).

Kemper's study dealt with a longitudinal sample of eight adults who kept journals for seven or more decades and a cohort-sequential sample consisting of diaries of ten adults at three time intervals within the longitudinal sample.

Kemper's extensive work on syntactic change across the lifespan would seem to indicate some sort of neuro-psychological foundation for the observed changes. In a telephone conversation in the spring of 1987, Kemper expressed the belief that observed changes were not related to social isolation or other such environmental or experiential situation of the elderly.

CHAPTER THREE - CROSS-SECTIONAL STUDY

Method

More than two hundred individuals were given a written request to write a narrative or biographical sketch of at least three hundred words in length. The request was contained on an information sheet briefly explaining the nature of the study and introducing the researcher. With the request was a short information form to permit collection of data regarding age, education, and other information about the individual (see Appendix 1).

Individuals were selected from acquaintances of the researcher in an attempt to assure representative distribution with regard to sex, age, and educational background. Initially it was hoped that at least five individuals would be found to respond in each five year age category from age twenty-one to ninety-five.

Individuals were also screened with regard to health. Individuals participating in the study were known to be in good health for their respective ages and elderly participants lived in their own homes. No elderly individuals were chosen who were nursing home residents, long-term care patients or who in other ways demonstrated an inability to care for themselves. Individuals over the age of seventy who participated in this study ought to be representative of the majority of elderly citizens who maintain their own residences and care for themselves.

After the initial contact follow-up was made by phone, letter or a personal visit. Of the individuals contacted nearly 80 or about

thirty-six percent responded. Of that number several had to be discarded for a variety of reasons. At least two older persons provided writing they had done some years ago. While it might be useful for some purposes, it did not fit within the immediate parameters of this study. Other individuals returned writing samples far too brief to be helpful. These too were discarded.

Seventy-three samples were left for analysis. These were not as evenly distributed with regard to the factors mentioned previously as the researcher had hoped. However, as will be seen from Table 1, all categories are represented in terms of age.

None of the individuals whose responses were utilized in this study were raised in the same family. They shared a mid-western upbringing. A few had homes in which a language other than English was spoken as they were growing up and this may have resulted in at least two of them having some unusual characteristics in their writing which will be examined later. Today all of the respondents speak English.

The writing samples were analyzed for the following information:

1. approximate number of words
2. mean sentence length
3. number of left-branching sentence embeddings
4. number of right-branching sentence embeddings
5. other unusual characteristics especially those related to syntax.

To determine the number of words in a sample, a word was defined as five or more letters. The number of letters per line was determined and multiplied by the number of total lines in the sample. Unfortunately this method reveals nothing about the vocabulary used by the participants, information which might be valuable in and of itself.

Left-branching embeddings were defined as those embedded elements, i.e., gerunds, infinitives, and subordinate clauses of various types which precede or interrupt the main clause. Although Kemper (1987) provides a somewhat wider definition of left-branching embeddings, for example, compound subjects and compound verbs, this study utilized a more limited definition because such compounds are usually considered part of the main clause.

Similarly right-branching embeddings were identified as those subordinate clauses, gerunds, and infinitives which followed the main clause.

Following the findings of Kemper (1987) it was hypothesized that both left- and right-branching embeddings would decline in frequency as the age of the writer increased. It was also expected that the number of left-branching embeddings would decline more dramatically because they are more difficult to process linguistically.

Frequency of both left- and right-branching embeddings was determined per hundred words of writing. In addition to relating frequency of embeddings to age, an effort was made to relate frequency of embeddings to educational background on the assumption that exposure to and practice of more complex writing might influence the complexity of the individual's writing.

Moreover, it was expected that certain other factors such as having been exposed to a language other than English as a child might influence sentence structure. The limited scope of this study did not allow for a formal analysis of such factors but does present evidence for consideration.

Results:

As can be seen from Figure 1, right-branching embeddings outnumber left branching embeddings consistently. Moreover it can be seen that at least a rough correlation exists between the number of left- and right-branching embeddings. The mean ratio of right branching to left-branching embeddings is about 2.5 to 1. This is consistent generally with earlier findings (Kemper, 1987).

Kemper found that individual differences in writing style and idiosyncracies varied widely. Certainly the cross sectional study reveals wide variations in a number of areas.

Some of these individual samples are worthy of discussion. CS-3, which displays an unusually large number of embeddings, may not be a reliable indicator of the writer's typical prose. The piece, which is a biographical sketch, contains extensive Biblical phraseology and some Biblical quotations whose embeddings account for much of the complexity present in what the writer offers as a testimony of his conversion experience (see Table 1).

The writer of CS-8 chose to respond to the request for a writing sample by adopting the persona of his dog in order to provide a narrative of a trip. This individual, who is well-known to the researcher, is highly educated and articulate as well as a published writer. It is entirely possible, however, that the writer's attempt at creativity resulted in the adoption of a style which influenced his syntactic choices.

The writer of CS-20 displayed some of the greatest syntactic complexity found in the study. A 58 year old female with post graduate education, the writer produced a travel narrative in which left-branching embeddings outnumbered right-branching embeddings by nearly 2 to 1. It seems unlikely that the topic alone accounts for this strong deviation from the typical ratio. In fact the frequency of left-branching embeddings in this sample probably accounts for the spike observed in Figure 1 at the 55 to 60 year old position (see Appendix 2).

CS-27 contained a large number of sentence fragments. Yet many of these units are not fragments in the truest sense of all but are created by the writer's non-conventional punctuation (see Appendix 3). In order to determine embeddings these "fragments" were regarded as elements of larger units when such relationships could be determined. Similar problems existed in evaluation CS-67 which consisted of many fragments (see Appendix 5) and CS-72 (see Appendix 6). Although no definitive conclusion can be expressed, it is interesting to note that none of these writers was a high school graduate, and in each case a language other than English was an influence in the home. In CS-27 Spanish was spoken in the home and for CS-72 French was spoken during the writer's developing years. The writer of CS-67 indicated that English was spoken by her family, but there was a strong Swedish influence.

Both education (see Figure 2) and linguistic background may influence the structure of an individual's writing. It is also reasonably clear that well-educated individuals write longer sentences than individuals with less education (see Figure 3 and Table 4). Education seems to be related to more complex sentence production in a

direct way (see Table 2 and Figure 2). Well-educated individuals generally produce more complex sentences than less well-educated individuals regardless of age.

The influence of exposure to other languages should be the subject of further study. It may well be that limited exposure to other languages during the years an individual is acquiring a selected language in a developmental fashion confuses the subject. But after mastery of syntactically complex structures is attained in one language, study of, or acquisition of a second language, as in the case of some of the well-educated individuals in this study, may further stimulate the production of complex sentences.

It must be acknowledged that topic selection, linguistic background, idiosyncrasies of the writer, and many other considerations may influence the structure of a writer's sentences.

CS-73, which has by far the greatest mean sentence length, was written by a highly educated male. He speaks English and French fluently and reads several other languages well. The writing selection was intended primarily as a press release and contains long lists, noun strings, of items. This catalog, rather than the personal characteristics of the writer, may account for the deviant sentence length, (see Appendix 7).

Statistical analysis indicates only a slight negative correlation between right-branching embeddings and age ($p < .05$). In spite of the dramatic decrease of left-branching embeddings in the writing of those above eighty, there is a slight positive correlation between left-branching embeddings and age over the life span to that age. For

this reason the cross-sectional study provides little evidence to support the notion of a decrease in sentence complexity with age prior to the age of eighty.

Other relationships prove interesting but not surprising. Right-branching embeddings show some correlation to educational level, ($r = .3479$, $T = 3.13$, 2 would be significant at the .05 level). However, both left-branching embeddings and sentence length show extremely strong positive correlations with education, ($r = .8496$ and $r = .8766$ respectively; T for both being above 13 with 2 being significant at .05 level). This strongly suggests that educational attainment has a direct bearing on an individual's ability to construct complex sentences.

Finally, in spite of deviations related to characteristics of individual writers, their topics, and their styles, there does appear to be revealed by the cross sectional study an age-related decline in the frequency with which both left- and right-branching embeddings occur in writing that occurs at approximately age 80. This decline may occur later in life than suggested by earlier studies, but it appears to be a significant decrement in syntactic complexity confirming in part the hypothesis.

CHAPTER FOUR - LONGITUDINAL STUDY

Method

Journals, diaries, letters, and personal papers of four individuals were examined. An effort was made to select a writing sample representative of each five year period of an individual's life from the early 20's until the five year period ending in their death. Three of the four individuals kept journals or diaries for most of their adult lives. The fourth individual rose to a position of political prominence and much of his personal correspondence has been preserved.

In order to be consistent with the cross-sectional study, writing samples were chosen that were about three hundred or more words in length. In some cases, particularly some journal entries, several entries had to be combined to attain an acceptable length. These entries were then analyzed for mean sentence length, number of left-branching embeddings and number of right-branching embeddings.

Although numerous journals, diaries and other writings were examined, most covered only very limited periods of time. For example, there are numerous Civil War and Spanish-American War diaries which cover only the war experience out of the lifetime of the writer.

Several journals, diaries, or day books were examined which spanned many years, but the daily entries consisted of only a few words or lines at most.

The writings selected for analysis came from work that spanned about fifty years in an individual's life and were long enough to adequately represent the writer.

Three of the diaries were located in the manuscript division of the Kansas State Historical Society. The papers which make up the fourth collection studied came from the Dwight D. Eisenhower Library.

Expanded Description of the Longitudinal Samples

The earliest writing examined was that of Issac Tichenor Goodnow who lived from 1814 until 1894. Goodnow's diary in 43 volumes was written from 1834 until the time of his death. It is not absolutely consistent in coverage, the most obvious gaps being in the 1840's. There are other noteworthy characteristics of Goodnow's diaries which need to be described. ITG-1, (see Figure 7 and Appendixes 8-10), contains writing that is considerably more complex than any of Goodnow's post-1851 writing. This is also true of ITG-3. It may be that the change in sentence complexity is due in part to the topic and overall length of the pieces. However, ITG-1 and ITG-3 were written while Goodnow was still living in the East whereas the post-1851 specimens were written as Goodnow lived on what was then the Kansas Frontier. It is difficult to believe that a major psycholinguistic change occurred in Goodnow. It is far more likely that the hardships of life on the Kansas Frontier did not permit the time for the polished longer entries made in the East.

The George Washington Franklin diaries span the period 1885-1935. Franklin lived from 1860 to 1936. The earliest diaries tend to have the shortest entries. Franklin's sentences often have an understood subject and this had to be accounted for in the analysis. In some of the last entries Franklin apparently developed the idiosyncrasy of using a conjunction, the and sign (&) in place of a period. He strung together many short but functionally independent clauses into very long compound sentences (see Appendixes 11, 12, & 13).

George Allen Root, who lived from 1867 to 1949, kept journals from 1895-1949. The length of individual entries remained reasonably constant. As did the other two individuals, Root primarily recorded daily events revolving around work and family activities.

The writing samples of Dwight D. Eisenhower consist of personal letters and a diary entry. No writing sample could be found of a personal nature for the period of time when the former President was in his early 30's. Eisenhower apparently kept a diary only a brief period of time around 1930.

The crucial factor in selecting samples for analysis was to find material of a personal nature that had not been edited or rewritten by others. The material selected was felt to be free of such problems by a staff member at the Eisenhower Library.

Eisenhower's writing displays a wide range of sentence complexity. This, again, may be due to the subjects of letters or the style Eisenhower chose for a particular piece. DDE-4 shows Eisenhower's attempts at humor, but it also displays an interesting variety of

sentence complexity as does DDE-5 which has a serious tone (see Appendixes 14 & 15).

Results

As in the cross-sectional study right-branching embeddings occurred with greater frequency than left-branching embeddings. The ratio was about 5 to 1, (see Table 6 and Figure 6).

The mean frequency of left-branching embeddings during the first three useable age categories (one was discarded due to limited sample size) is .88 per 100 words. During the last three age categories this mean frequency drops to .46 per hundred words.

The decline in the frequency of left-branching embeddings is noticeable after age 66. In fact until that point there seems to be a slight increase in the mean frequency of left-branching embeddings with age.

No noticeable decline in the mean frequency of right-branching embeddings occurs until the 76-80 age category and even then it seems incorrect to call it a decline when there are 41-45 and 46-50 with full representation and large writing samples that have lower occurrences of right-branching embeddings.

Unfortunately none of the writers whose works are included in the longitudinal study lived long enough to provide information comparable to that yielded by the 80 and 90 year olds in the cross sectional study. The greatest limitation of the longitudinal study is the small sample size both in terms of individuals and in terms of years spanned. However, the limited evidence provided by the decrease in frequency of

left-branching embeddings during the last decade and a half covered by the writing samples tends to support the hypothesis.

CHAPTER FIVE - DISCUSSION

The researcher was surprised to find that for most people a great deal of anxiety surrounds the writing process. In most cases individuals agreeing to supply writing samples expressed concern about having their grammar graded. In spite of assurance that the study did not deal with proper grammar and that identity of writers and content of their writing would be kept confidential, much reluctance was expressed due to uncertainty about acceptable grammar. How much of that anxiety arose from the researcher's being known both as an English teacher and writer is unknown.

Furthermore, men were more reluctant to write than women. Several older men wanted their wives to write pieces for the study. One gentleman in his seventies responded to the request for a writing sample by saying, "Oh, I don't do any writing. Momma does all the writing. Get her to do it for you". While this reaction was not universal, similar statements were encountered often enough to suggest that in this culture male attitudes toward writing often seen in schools as a reluctance to write continue throughout the life span.

Moreover, older subjects, both male and female, expressed anxiety about writing because of concerns over their penmanship. This was especially true of the individuals above eighty-five years of age. One man in his late seventies, CS-47, attached a note explaining that at one time he had been capable of excellent penmanship and had received awards for it, (see Appendix 14). A 92 year old man, who still lives in his own home and is in good health for that age, granted the researcher an extensive interview, but would not write because of a trembling in his hands. No amount of persuasion would overcome his concern about his

ability to write. Several other older individuals expressed similar concern.

Changes in penmanship were also evident in the longitudinal study. A glance at the Goodnow diaries reveals a considerable difference in penmanship between the earliest diaries and the last ones (see Appendixes 8, 9, & 10).

To what extent reluctance to write and the lack of practice of writing caused by physical problems contributes to decrements in sentence complexity in the extreme elderly is unknown, but a relationship is possible.

It is also possible that the social isolation experienced by many elderly people may be a contributing factor to declines in the number and variety of complex sentences in both oral and written expression. This researcher was struck by the apparent loneliness of some of the participants in the cross-sectional study who were above the age of eighty. In some cases it was very difficult to end an interview with them. They wanted to share stories of their past, to show memorabilia, and to just generally visit. A monthly or weekly visit with relatives is not the same as daily interaction with family, friends, and co-workers generally experienced by less aged adults.

It may be argued that radio, television, and the telephone would tend to offset some of the effects of social isolation in the elderly. Radio and television are passive events syntactically. There is no need to communicate with the T.V. or radio. Syntactic information received from T.V. or radio may have a low level of complexity. Furthermore, radio, television, and telephones require that the elderly hear well,

but many elderly do not. So, it is doubtful that these devices compensate for a general decline in communication that comes with aging.

Kemper in her 1987 study mentions that a strong cohort effect was observed which generally suggested a trend in English away from the use of left-branching embeddings, for example, infinitives used as subjects.

This researcher feels strongly that some attention needs to be given to studying overall shifts in sentence complexity from one century to the next. Preliminary consideration leads to the conclusion that writing today consists of fewer complex sentences than it did 150 years ago. Sentences are shorter and have fewer left-branching embeddings. Writing today is intended to be read faster and processed more easily than writing of an earlier period.

Does this suggest an overall decline in psycholinguistic functioning? Not necessarily. Complexity is no guarantee of clarity. A large number of left-branching embeddings while adding syntactic complexity may only obfuscate the message.

Kemper (1987) offers the following illustration of left-branching constructions: "The dog who the woman who the boy watched owned chased after the ball" (p. 323). Why would anyone seeking to express him or herself clearly use a syntactic structure so difficult to process? The same question could be raised about many other syntactically complex sentences. Kemper points out that right-branching embeddings are easier to process because the information contained in the embeddings is processed sequentially as oppossed to concurrently in the case of left-branching embeddings (Kemper, 1987).

A decrement with regard to left-branching embeddings does not automatically lead to a loss of clarity of expression. Nor does a decline in the number of right-branching embeddings necessarily result in sentences which are less capable of communicating ideas clearly. In fact long, complex sentences containing a number of either right- or left-branching may only serve to obscure the intended message.

Does a sentence written by Mark Twain contain more meaning than one written by Hemingway? Many questions can be raised about the relationship between meaning and sentence complexity. The answers to such questions will have a bearing in determining the significance of observed changes in the complexity of written sentences in elderly adults.

Educators and others dealing with older adults will have to adjust their methods, materials and attitudes toward older adults. It will be important to remember that declines in sentence complexity do not occur in the writing of all adults. The importance assigned to the rather limited changes suggested by this and other research in the complexity of written sentences produced by older adults should be of concern to educators serving a society in which an increasing number of learners are older adults.

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TABLES

TABLE 1: Cross-Sectional Individual Data

Code #	Ed.	Total Words	W/Sen	Lft. Bran	Rt. Bran	Sex	Age	Frag	Lft Br.	Rt. Br.
CS 1	3	336	13	3	28	F	85	3	0.89	8.33
CS 2	6	552	11.1	9	27	F	83	1	1.63	4.89
CS 3	4	372	11.6	10	29	M	33	0	2.69	7.79
CS 4	4	412	7.5	6	10	F	28	0	1.46	2.42
CS 5	5	260	14.4	8	14	F	80	1	3.07	5.38
CS 6	3	250	10	1	10	F	94	0	0.4	4
CS 7	3	350	7.6	2	13	F	74	0	0.57	3.71
CS 8	6	430	16	3	13	M	56	0	0.7	3.02
CS 9	6	450	11.5	13	16	M	72	0	2.88	3.55
CS 10	3	416	13.5	10	14	F	82	1	2.4	3.36
CS 11	3	400	17	9	22	M	68	0	2.25	5.55
CS 12	4	315	15	10	14	M	77	0	3.17	4.44
CS 13	3	400	16	3	18	F	68	1	0.75	4.5
CS 14	5	434	10.5	9	15	F	90	0	2.07	3.46
CS 15	4	264	10.5	7	12	F	51	0	2.65	4.54
CS 16	6	416	14.5	7	12	M	64	0	1.68	2.88
CS 17	2	300	12.7	3	2	F	79	1	1	0.66
CS 18	6	420	18.6	5	14	M	41	0	1.19	3.33
CS 19	4	312	12.4	0	12	F	32	0	0	3.84
CS 20	6	448	20.3	24	13	F	58	0	5.35	2.9
CS 21	4	265	11.5	3	14	F	42	0	1.13	5.28
CS 22	3	544	18.7	9	15	M	53	0	1.65	2.76
CS 23	2	270	15.6	1	14	M	28	0	0.37	5.18
CS 24	5	120	9.2	0	3	M	31	0	0	2.5
CS 25	4	378	13	4	11	M	85	0	1.06	2.91
CS 26	3	210	9.1	2	3	F	71	0	0.95	1.43
CS 27	2	198	15.2	1	2	F	35	7	0.5	1.01
CS 28	2	252	14	2	11	M	92	1	0.79	4.36
CS 29	2	291	10.4	1	8	F	63	0	0.34	2.74
CS 30	5	276	12	2	8	M	25	0	0.72	2.89
CS 31	1	260	11.3	2	3	F	91	0	0.76	1.15
CS 32	3	255	8.7	1	6	M	81	0	0.39	2.35
CS 33	4	504	13.6	2	9	M	83	3	0.39	1.78
CS 34	4	384	18.3	2	10	F	40	0	0.52	2.6
CS 35	1	232	12.8	4	14	F	76	1	1.72	6.03
CS 36	5	217	19.7	3	8	F	52	2	1.38	3.68
CS 37	5	248	13	3	9	F	61	0	1.2	3.62
CS 38	6	392	11.5	4	12	M	28	0	1.02	3.06
CS 39	3	620	10.3	10	12	F	23	4	1.61	1.93

TABLE 1: Cross-Sectional Individual Data

CS 40	6	364	15	2	11	F	31	0	0.55	3.02
CS 41	4	275	8	0	10	F	21	2	0	3.63
CS 42	4	294	11.7	5	18	F	23	0	1.7	6.12
CS 43	2	276	9.8	0	5	F	86	0	0	1.81
CS 44	4	312	19.5	1	10	F	77	3	0.32	3.2
CS 45	6	561	17.5	13	11	M	70	0	2.31	1.96
CS 46	4	324	11	5	13	M	57	0	1.54	4.01
CS 47	4	498	9.5	5	19	M	77	0	1	3.81
CS 48	5	329	12.6	4	19	M	23	0	1.21	5.78
CS 49	5	264	26.4	4	9	M	50	0	1.51	3.4
CS 50	4	264	12.5	2	5	F	48	1	0.76	1.89
CS 51	3	312	13	3	7	F	49	0	0.96	2.24
CS 52	4	300	23.5	5	20	M	63	0	1.66	0.66
CS 53	3	240	10.4	1	5	F	51	1	0.41	2.08
CS 54	4	232	11.6	6	3	F	47	0	2.58	1.29
CS 55	4	759	15.8	6	19	M	66	1	0.79	2.5
CS 56	2	276	12	2	7	F	54	0	0.72	2.53
CS 57	3	520	10	4	14	M	47	0	0.76	2.69
CS 58	3	390	10.5	1	11	F	24	0	0.26	2.82
CS 59	5	324	13.5	7	8	M	28	0	2.16	2.46
CS 60	3	430	14.8	6	6	F	43	0	1.39	1.39
CS 61	4	342	10.3	3	20	M	46	0	0.87	5.84
CS 62	5	378	15.1	4	13	F	35	0	1.05	3.44
CS 63	3	350	19	9	21	F	36	2	2.57	6
CS 64	6	392	14	9	11	M	41	8	2.29	2.8
CS 65	4	364	12.1	4	9	F	35	3	1.09	2.47
CS 66	5	295	12.4	7	15	F	28	0	2.37	5.08
CS 67	2	416	7	2	12	F	69	22	0.48	2.88
CS 68	6	290	18.1	3	15	M	46	0	1.03	5.17
CS 69	3	336	11.2	5	12	M	22	0	1.48	3.57
CS 70	5	567	13.8	14	45	F	38	0	2.47	7.94
CS 71	4	385	17.1	8	15	F	41	0	0.26	3.9
CS 72	1	350	6.3	2	11	F	88	3	0.57	3.14
CS 73	6	530	44	1	7	M	42	0	0.19	1.32

TABLE 2: Left and Right Embeddings Related to Education

Educational Level	Left Branching Embeddings	Right Branching Embeddings
1 (Eighth Grade or Less)	1.02	3.44
2 (Some High School)	0.53	2.65
3 (High School Grad)	1.16	3.45
4 (Some College)	1.22	3.57
5 (College Grad)	1.60	4.14
6 (Post Graduate)	1.74	3.16

TABLE 3: Words Per Sentence--CROSS SECTIONAL

Age Group	Number of Words Per Sentence Ranked by Age Groups in 5 yr Increments
20--25	10.90
26--30	12.10
31--35	12.90
36--40	17.00
41--45	20.00
46--50	14.60
51--55	14.26
56--60	15.80
61--65	15.40
66--70	14.70
71--75	9.40
76--80	14.00
81--85	13.98
86--90	12.15
91--95	10.32

TABLE 4: Words Per Sentence by Education--CROSS SECTIONAL

Educational Level	Number of Words Per Sentence Related to Education
1	10.13
2	12.08
3	12.51
4	11.50
5	14.38
6	17.67

TABLE 5: Left and Right Branchings by Sex--CROSS SECTIONAL

Sex	Left Branching Embeddings	Right Branching Embeddings
Female	1.23	3.45
Male	1.33	3.48

TABLE 6: Composite of Longitudinal Studies

Age Group	No. in Sample	Total Words	Left Branching Fre.	Right Branching Fre.
20--25	2	577	1.42	5.16
26--30	3	890	1.67	5.50
31--35	0	0	0.00	0.00
36--40	4	1584	0.57	4.54
41--45	4	1998	0.70	1.41
46--50	4	2985	1.97	2.65
51--55	3	1695	0.71	4.36
56--60	3	894	1.00	5.48
61--65	4	1614	1.17	4.33
66--70	4	1240	0.32	4.35
71--75	3	969	0.31	5.16
76--80	3	805	0.75	3.60

FIGURES

FIGURE 1

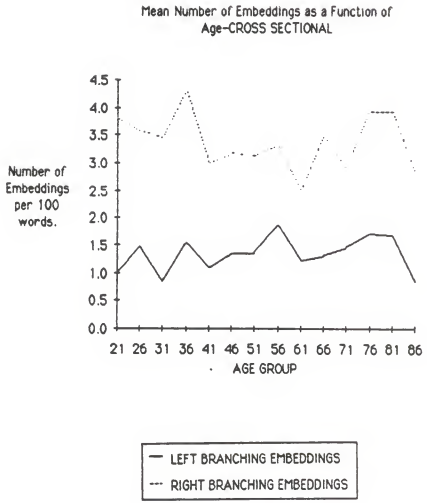

Mean Number of Embeddings as a Function of Age-CROSS SECTIONAL
Number of Embeddings per 100 words.
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
21 26 31 36 41 46 51 56 61 66 71 76 81 86
AGE GROUP
LEFT BRANCHING EMBEDDINGS
RIGHT BRANCHING EMBEDDINGS

FIGURE 1a

Mean Number of Embeddings as a Function of Age-CROSS SECTIONAL

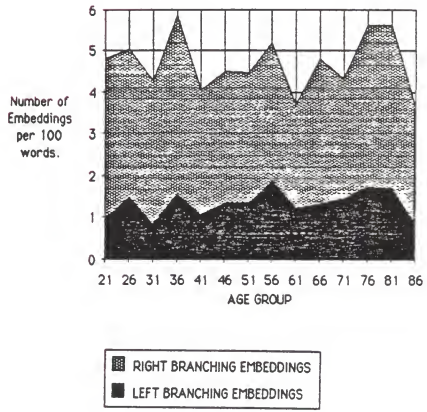
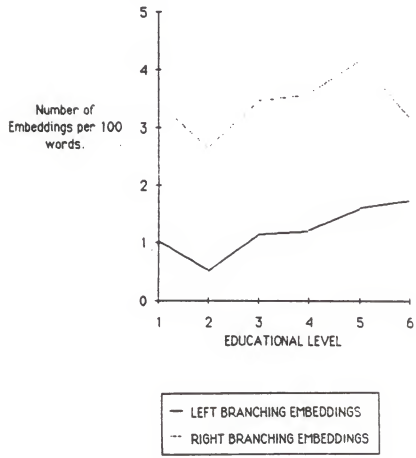
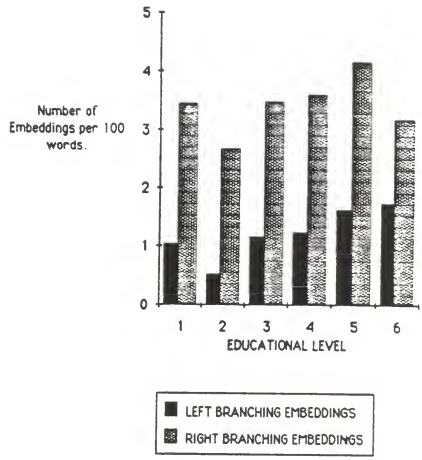


FIGURE 2

Mean Number of Embeddings as a Function of Education–CROSS SECTIONAL



Mean Number of Embeddings as a Function of Education-CROSS SECTIONAL



Number of Words Per Sentence Related to Educational Level-CROSS SECTIONAL

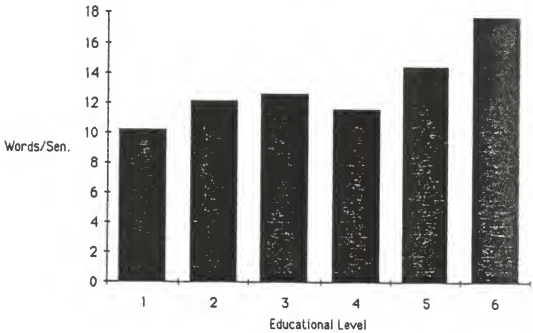
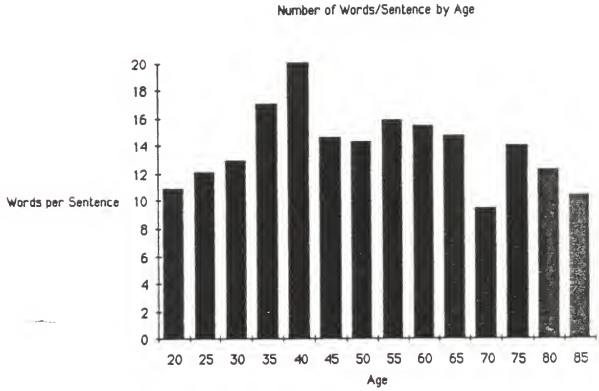


FIGURE 4


Number of Words/Sentence by Age
Words per Sentence
0
2
4
6
8
10
12
14
16
18
20
20 25 30 35 40 45 50 55 60 65 70 75 80 85
Age

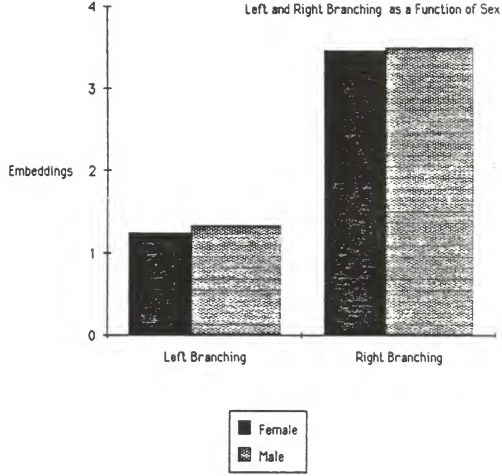

Left and Right Branching as a Function of Sex
Embeddings
4
3
2
1
0
Left Branching
Right Branching
Female
Male

FIGURE 6

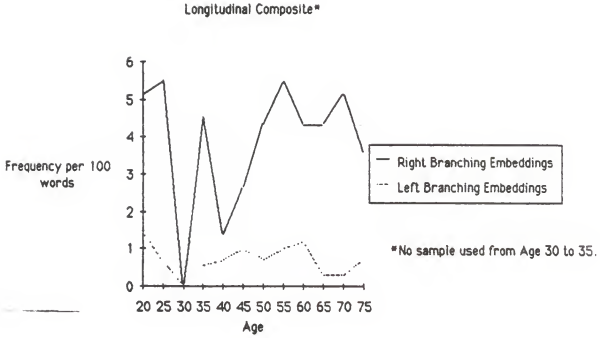
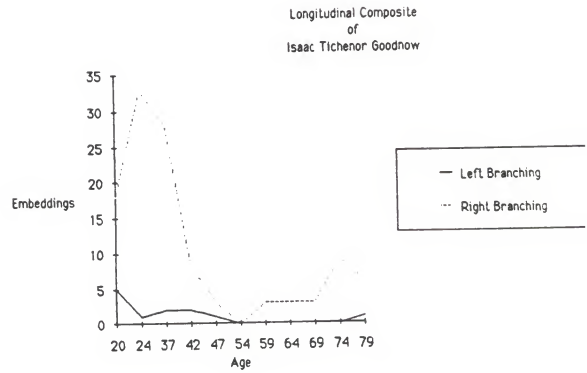
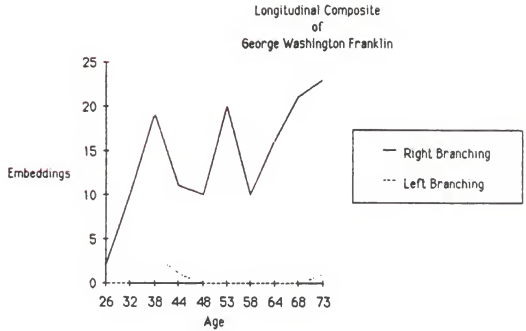

Longitudinal Composite*
Frequency per 100 words
6
5
4
3
2
1
0
20 25 30 35 40 45 50 55 60 65 70 75
Age
Right Branching Embeddings
Left Branching Embeddings
*No sample used from Age 30 to 35.

FIGURE 7



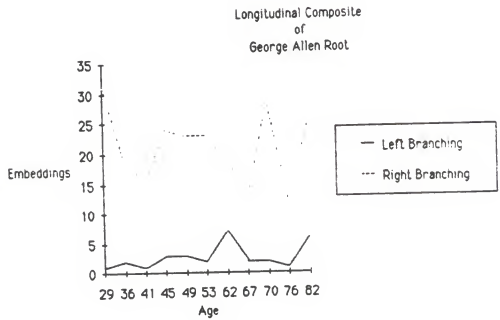
Embeddings per writing sample examined

FIGURE 8



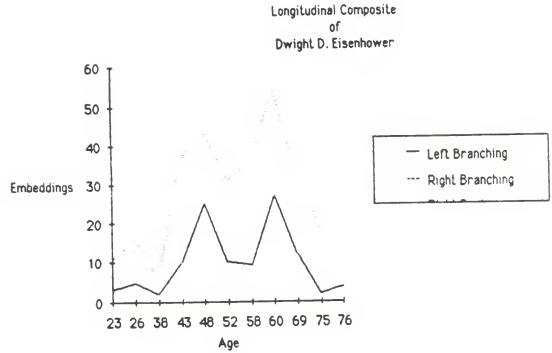
Embeddings per writing sample examined

FIGURE 9



Embeddings per writing sample examined

FIGURE 10



Embeddings per writing sample examined

APPENDIXES

Appendix 1

INFORMATION SHEET

As a graduate student at Kansas State University I am conducting research dealing with the way in which the written language of adults changes over the life span. I am asking for your help in gathering information for this study.

I would appreciate a story about your life or a trip you have taken. I need a narrative or biographical sketch of at least three hundred words in length for linguistic analysis. That's about the amount of writing on both sides of a sheet of paper when written out longhand.

All personal information in either the actual writing or on the subject information sheet will be kept strictly confidential. If you desire to know the results of the study, I will be glad to supply you with a synopsis of the study after June first, 1988. Your help will be greatly appreciated.

NAME: _____

DATE OF BIRTH: _____

EDUCATION: _____ 8th Grade or less

_____ Some High School

_____ High School Graduate

_____ Some College

_____ College Graduate

_____ Post Graduate College

_____ Was a language other than English spoken in your home when you were growing up?

How would you characterize your primary career?_____

_____

_____

Sincerely yours

Elby R. Adamson

You may write your sketch or narrative on the attached sheet.

CS 20

Although I've been fortunate to be able to travel some, my most memorable trips were to Europe in the summer of 1956. A fellow teacher and two of her college friends decided a fourth traveler was needed; I was invited to go with them. We four met at the YWCA in Montreal, Canada, and the next day embarked on a German ship, the Seven Seas, bound for Bremerhaven, Germany.

In the hectic last days of the school term, the hustle of moving home and packing for the trip, I added my sister's graduation from college and receiving my Master's degree. I was ready for the relaxing days aboard ship. On board we four got to know each other and take turns to plan our trips. We realized we were planning to cover more miles than would be possible with pedal bicycles. Since we wanted to stay in Youth Hostels, we couldn't travel by car - therefore Mo-Peds were our choice.

In Bremmerhaven we purchased our bikes and backpacks. We used our bikes in Holland and part of Germany, then shipped them to Constanz, Germany, where we picked them up after we'd been to Italy, France and Switzerland. When we received our bikes, we travelled by bus, boat and train. Them were all interesting ways to travel, but not quite as exciting as the Mo-Peds.

Travelling on the Rhine River, we received a free "tea" after we'd recounted some of our experiences to a couple and their daughter - they were travelling in quite a different style than we were! A stolen bike, a bike-truck accident that required the local German police, their highway patrol and American Military Police to unscramble the legalities, camping out because the next Youth Hostel was farther than we'd planned, numerous flat tires and interested children who always appeared when we were at a repair shop are things I remember.

CS 20 pg. 2

The delicious pastries in German bakeries, the "Yellow Rose of Texas" that was played on the juke box in the bakery-cafe for us Americans, and the warm, friendly people who not only gave us directions but often hopped on their bikes and led us on the right way. — All these are things that make Germany memorable.

In the Alps going down the mountain on a mini bike into Garmisch-Partenkirchen was an experience I'll not forget. When someone remarked that the scenery was fabulous, Anna replied, "I'll never know; I didn't have time to look; I was too busy making the curves!"

The windmills and quiet countryside in Holland; Juliet's balcony in Verona; the canals and gondolas in Venice; in Rome an opera in the Baths of Caracalla, the Coliseum, St. Peter's Square, the Catacombs and a walk along the Appian Way at evening; Paris; the Alps; Clear, neat Switzerland — who could say which was the best.

We sold our bikes in Germany and went to the British Isles — London, Cambridge University — just in time for Evensong, the Lake Country with all Youth Hostels full because it was Bank Holiday, Scotland with its beautiful woolens and a hostel in a castle, Wales and a ferry to Ireland, then a bus across Ireland from Dublin to Shannon where we were to meet the airplane to fly home. While we waited a day for our flight, we stayed at Mrs. Murphy's Bed and Breakfast.

Seven days by ship to Europe and seven hours home by airplane, a relapsing begin ing and a quick return were what we needed. As I think back to a trip I took more than thirty years ago, I realize I do remember places and people, impressions and experiences, most of them enjoyable. Truly it was a memorable trip.

CS 27

I was born August 3, 1952 in Pueblo, Colorado I am the daughter of

later to be joined by two sisters and four brothers.

I being the oldest of seven children born to

I also have a half brother older than myself by my Fathers first marriage. At the age of five in the year of 1957 I started School in Lovland, Colorado Where I spent the rest of my school years. I was attending Loveland High school. When at the age of sixteen I was forced to quite school. I had to take up the responsibility of taking Care of my two younger sisters and one brother. After the divorce of our parents.

At the age of twenty I was married to my childhood sweetheart, in Loveland, Colorado on June 23, 1973. Two

years later we were blessed with the birth of our daughter, Andrea Lee. Born on December 28, 1975. Two years we moved to Reno County Kansas in 1980. We lived there until moving back to Colorado in 1985. It is where we now reside in

(1)

CS47

3-19-88

I shall write about a trip I took in 1984 with my brother and his wife. What makes the trip unique is that my brother, who is retired from the service doesn't have kidneys that function. He is on dialysis machines 3 days a week.

He started the trip from Denver where he lived at the time. He had spent a lot of time and money in training and preparing himself for this trip. And the equipment it takes to do this job of equipment and instrumentation to do this job. He got all of this stuff from the V.A. in Denver. When we started out transporting all this equipment and supplies. He had a new Buick station wagon which we used & we were able to stuff all this stuff in this station wagon, plus a carrier on top and still have room for our selves & the car was terribly overloaded.

I want to say here that there are very few people on dialysis machines that have the guts to tackle a trip like this. We usually got started early on mornings we'd head south & west to the Southwest and first place to visit was the Bill Cody Museum in Cody Wyoming. The Winchester museum is there also & that was real interesting especially all the different types of guns that Winchester had ever made. I could have spent a lot more time there except we had to leave and look for the proper

kind of motel as he could set up. Too
Changed his bid as he called the application.
We had to use motels that were on the
ground floor, and they had to be sprinkled
Also with access to water, sewer and electricity.
Then operations could take eight hours for
each time from start to finish.

We spent one day at Gallows Stone and then
on to the Coast via Prague. We got on
highway 1 and headed south. You don't
make good time on this road because it
is so crooked but follows the Coast so close as
possible for mile and miles, but the scenery
is beautiful. We stopped and toured the old
Redwood Lumber Co. Stockton at
Fort Bragg, which was really something to
see. What a tree beyond any imagination
would, — you could one man get them but spent
so foolishly on a life time. Too could there
not master by a peace. I shall not try to describe
this place as it is beyond my ability.

We spent some time in Fisherman's
Wharf here we got on a boat to go to the
old Mission called Dolores. I don't know how to
spell it, but you know what I mean. This
was a real interesting place. We spent two
days here then started on south. The further
south we went the thicker the traffic and
people got. We finally went into Old Mexico
but did not stay long there. We finally came back
to San Diego and spent a week there on the
Coast. We had real good access to the beach
which we enjoyed. When we left here, we went to
Las Vegas where we spent several days, and several
hundred dollars at the gambling places. This is
the place to go if you like to spend money and
get something for it.

(3)

When we left Vegas we headed for Denver and home. We were real anxious to get home. We had been gone a month and covered over 5600 Miles.
This was a trip we will long remember but wouldn't give a dime to do it again.

Sincerely

Wichita, Kans.
67218

I am going to add this note that I feel will be hard for you to believe. But at one time I was going to Business College and Independence Kans. in 1931 and 1932. There was great importance placed on penmanship. We were required to practice this every day and were graded on our improvement. We were trying to duplicate the writing in our text book of which was called The Spencer System.
I stuck to it pretty well and always got the best grade in the school.
There was a state contest being held for all schools since the one I was going to. My instructor submitted one of my papers in the contest and I won first place.
Ben Paulen, Kans. governor at the time came to Independence to shake my hand and present me with a Carter - Pen and pencil for being the best penman in Kans. I still got the pen.

— CS 61

July '83 We packed food and belongings into a motorhome, rented from a private individual in Denver a trip we had all looked to and planned for several months With a prayer for God's protection we joyfully headed north to Wyoming, west through a corner of Utah and into Idaho Enjoying different scenery antelope, pasture lands, rolling hills, canyons, Lava beds, many places we'd heard about and eating our meals in the motorhome.

With Mountain Home, Idaho in view and everyone relaxed suddenly come alive, from a loud POP - grinding motor sound, no Power, and coasting to a stop along side of the hiway, and what seemed like a desert, Finally able to hitch-hike a ride with a big truck to a 'Truck Stop' to get a tow-truck which towed us to Boise, Idaho (45 miles, + $150.00) 5 of us left in the motor home, tried to be calm, played a game of "Skipbo" Caught one cheating by taking wrong card file. This broke the tention, & good for a laugh.

This couldn't have happened on a worse week-end 4th of July, Mechanics Off — Found we had a broken went through a piston, ruined the motor, Owner notified He would ship a motor, but this would take to the end of our vacation!! Our guys were able to locate a Van to rent Packed our belongings into Plastic grocery bags (23 bags of personal samsonite) We would be eating out, sleeping in motel rooms. Im sure some questioned the party in some rooms with Plastic bags.

Change in plans and route, Eliminating the Red Wood Forest in northern Calif. we headed for Seattle, Wash. and would not be able to through the Black Hills in So. Dak. enroute home, but back to Boise, Idaho to return the motor home to Denver.

But more beautiful and different scenery to enjoy along the Columbia River, several Dams and Parks, Mt Hood and the Mt. St. Helen's devastation, clouds prevented us viewing the Volcano.

Seattle, and relatives prepared for Camping at their cabin at Lake Keechelus, Wash. a rustic cabin, water from the well across the road, no electricity - all lamps - Old Monarch wood range - Best of all "Sweet Marie" stood out back 20-30 steps from the back door. Thanks to "Pissel" the 2 holer did smell sweet! Sleeping was the best in thickfresh mountain air, and the tall trees whistling with the breeze - of course our appetites were ready for the aroma that greeted us each morning - Pancakes, Bacon or Sausage, eggs, And coffee. 4 days swimming canoeing, hiking, picnicking, Campfires (with s'more) This family are the greatest Host & Hostess.

Back to Seattle with more activities. All 12 of us packed into the Van to Anacortes, where we boarded a Ferry & several islands, exploring sights, where rich & famous lived, museums, and more beautiful scenery.

After a week in and around Seattle we headed for Canada north as far as Jasper, Lake Louise and Calgary. "Stampede" was in progress here. Rain prevented us attending the Rodeo. But we toured through a huge room full of tables against the wall & rows & rows between, for gambling. People crowded around each. Did never seen the like, or expect to again.

Back to U.S.A. through Glacier Park & Boise! Home safely with no mishaps. But to remind ourselves - Never rent a motorhome again for a vacation! (That was 5 years ago - who knows, we may forget a bad experience that turned out such good memories)

Written by O 5/88

CS-72

I was born Aug 3-1899 in a dugout near little town Call Macfarlld 5 t south west of Concordia Kansas at age of 4 yrs old. My mother + father bought a farm 2 miles of Aurora Kansas I lived there with my folk till 1916

We live on the farm my mother was sick a lot so went my sister got marry I was only 10 yr old I was the young est of the family I had to help with cooking washing my dad help us would mixt the bread I was to small to do that then put it in pans + bake Dad help with washing also as my mother was sick a lot that way I didnt get to go school like ever one else I was sick a lot

I started to help with the Chores I like to go milk the cows went I was 7 yr old then as I milk 6 cows in my ten we had lots snow those day in winter my Dad made a sled she hitch the horses to sled we go to Church + town in sled

My mother raised turkey + geese + Chicken I have to follow one old hen turkey she stole her nest + had to watch her see were she laid her egg so we could set those egg to have more turkey some time it take 28 hours Then we raised geese for the feather to make feather bed + pillow they had just right time to pull their feather they were warm they were we could pinch you + hurt with their biting Then we go get a bucket of corn after they get corn ear out we get bucket clean one make matter out them we had to shuck them over more to make out bed it make a good bed

My folk move in town Aurora Ks in 1915
I live there for a year then got Married to Joe
on May 9-1916 we farm all our life we
had our first Ford Car 27 hrs had rode over horse
though we had some thing we farm with Horses then.
Our first baby was born 1918-26 Dec it was
year the flu was so bad but I made it OK
It was worst snow storm Joe had dad went get the
wagon Horses cross field it was awful storm they
finely got him
we had 6 children we were very poor but we never
went with any thing to eat
we went through dusty 30 Joe worked on W PA with
his horses to feed ~~feed~~ feed ponies to get some money Joe was
hard working man I hope more of every family Jo
through there Grasshopper day they ate all your garden or
Crop it was an awful we had those dust storm
It came around 10 Clock Morn the children just come
home from school we all went to Cave it was so
dust our younger son was only 2 yrold I had to put sheet
wet them put it over his Crib so in morn was all dust
we had wash dishes before we could make breakfast
the Grasshopper cover telephone pole + line I hope we never
see those time again Joe died in 1980 June 30
We have a wonderful family there all marry
have so many great Grandchildren I love them
all

CS-73

Appendix 7

How would you like to make history? It is something that has already been done by many ABA members, both as companies and as individuals, but unfortunately much of the record of their accomplishments has either already been lost or is in the process of disappearing. One long-time ABA member, Mr. Harold Freund, cares enough about the history of baking in America to try to preserve some of it.

In 1982, Mr. Freund founded the American Museum of Baking under the auspices of the American Institute of Baking in Manhattan, Kansas. Although the initial growth of the Museum was somewhat slow, it has been gaining impetus through the continued patronage of Mr. Freund and the greatly increased interest in the project on the part of a number of respected and long-established bakeries and bakery supply and equipment companies. Dr. Bill Hoover, Mr. Don Dubois, numerous AIB seminar participants and students, members of the public, and even a few foreign baking and milling companies have all taken an interest in the growth of the Museum's collection of historical records, photographs, patent machinery models, small production equipment, and a unique assemblage of baker statuettes from all over the world. There are also highly unusual items, such as samples of actual 4000-year-old Egyptian bread from the Pyramids, 2000-year-old Roman bread and grain from Pompeii, priceless wood and pottery bread stamps from Byzantium, and rare books on baking from the 18th, 19th, and early 20th century.

The backbone of the collection, however, and the focus of recent acquisition efforts, are the many different items which relate to the history of the Baking Industry in North America. Small production equipment, advertising materials, signs, and premiums, wrapper stamps and framed wrappers, bread ration books, early company production records, and all types of photographs represent the growth of American baking from its small-shop beginnings to its present state.

That history is not complete, nor will it ever be. Many important baking companies are not represented, and significant gaps exist in the records of those which are present. A large portion of the historical record of America's bakeries has already been lost, and other segments are in danger of disappearing through company mergers, buyouts, and other major changes in the industry. Important documents and photographs are lost or discarded, and advertising materials, equipment models, and production items are either discarded or become nostalgic items of home decoration or rusting stock in small antique shops and junkyards.

You can help to change this situation, and to preserve part

of the proud history of ABA member companies and individuals. Please search your early company records or archives, and call or write either Dr. Bill Hoover, President of AIB, Paul Klover, Administrative Vice-President of AIB, or Ron Wirtz, Curator of the American Museum of Baking, to arrange for a tax-deductible donation of funds or artifacts, or a long-term loan of historically significant materials to the Museum. Your children and grandchildren, as well as the American public, will certainly thank you.

3

Lines to a Friend written in an Album.

Dear Sister

In attempting at this time to delineate upon this sacred page a token of friendship I would say, the appellation used at the commencement of these lines, would suffice as a specimen of the feeling of the heart in regard to your welfare and happiness. Although in the remembrance of friends a visible token is not always requisite, yet it may serve as a pledge for the continuance of the affections of the soul. When called to part with associates, the thoughts of the happy hours, spent in their society oft-most involuntarily rush to the mind. O'er these moments we grieve and the seperation in many instances is for life, it is calculated to spread a gloom over the warm and feeling heart. Perhaps in but few cases is this more realised, than by those who have striven together to ascend the hill of science, those who have been deeply interested in the same favorite pursuits we have encouraged and inspired each other with a hope and ardour to look forward to the benefits of this orb and the glories of the starry heavens. They have united in prayer and heard their voices often held sweet converse upon the sublime works of Creation, and each has been hoping in the Co and the happiness of the other, But Oh! how soon is the scene to be changed, the stern duties of life demand a seperation, and the little bands is scattered to the four winds, to face the rough storms of life. But hills and dales, mountains and vallies may intervene, yet the devoted friend, by imagination, will often recall the

4

Sacred interviews held with the absent and again act over the pleasant scenes of youth. A world lying in wickedness & desolation calls loudly for us Christians to arrest back the powers of darkness. This inspires the philanthropist with resolution to leave many an endearing circle that he may enlighten the ignorant and proclaim liberty to the captive.

May the same spirit dear Sister, ever arm you with courage and fortitude to impart that knowledge and shew forth that light which has for its object the benefit of the world. A life of usefulness is the way of happiness and the road to Heaven.

Farewell, if we meet no more on earth, may we be of that favored company who shall reign with our redeemer in the Paradise of God. Adieu!

D. J.

Wm Chuckam Nov 7th 1835

A. M. P

the great Washington. He died 14 years since. One of the neighbors very much questioned whether we should meet with a favorable reception from Miss Ann, but I made bold to tell her that I was a stranger, & took great interest in every thing pertaining to the war of '76; she rec^{d} us with the greatest cordiality & seemed to enjoy a rehearsal of the scenes of old with as much zest as ourselves. She brought down the sword of her uncle, & I had the satisfaction of putting it by my side & drawing it forth as probably the owner had done, only not with the same intention, At taking leave of the lady, she almost seemed like an acquaintance,--her eyes were well nigh filled with tears as we hinted to her that there is a world of rest to which we may all aspire, & all gain by faithful effort!

Every year on the 26th of Dec is enacted by a sham fight, the "taking of the Hessians at Trenton." As nearly as possible, the whole scene is acted over again; this fixes the events quite distinctly in the minds of the people. Visited the State House, a very pretty building, with surrounding grounds, laid out quite tastefully. At 12 took the steamer Edwin Forrest for Philadelphia, distance some 35 miles. In sailing down the Delaware, we had a beautiful chance to see the little pleasant villages & country seats on either side in Pennsylvania, or New Jersey. I was most pleased, on the whole, with the Pennsylvania side! Arrived in P___ at 3. P.M. Went to the Exchange, Navy Yard, Old U. S. Bank, now the Custom House, &c. Am somewhat fatigued & shall retire early to rest for the labors of the morrow.

10th Thursday.

Visited Fairmount Water Works, took an outside view of "the model Penitentiary," in which the principle of solitary confinement is carried out; procured a permit & went through the celebrated Girard College; it consists of one main building & 4 others, 2 on each side, all built of

marble. The main building is surrounded by a portico, supported by 34. fluted columns of the Corinthian order of architecture, some 3 1/2 ft in diameter, & 28 ft high. The execution of the work & the style of architecture is worthy of the palmiest days of Greece. It is not propsrly a college. Candidates for admission must be fatherless & motherless, & poor, from 6 to 10. years of age: they are kept & supported every way till 16 years old. They number 304. The expenses of Girard College annually are $63.000: average expense to each scholar, about $207. On the whole it will no doubt do much good. An immense amount of money has been uselessly laid out on the building. Went into the Hall of Independence, in which the Continental Congress held its sessions, & in which the Declaration of Independence was signed. Saw a piece of the stone on which John Adams stood to read the Declaration to the People. Sat down in the chairs, occupied by Sec^{y} Thompson, & John Hancock, Pres^{t} of Congress. Saw the old Liberty Bell, now cracked; it used to be rung on the 4th of July but is now only interesting only from its former use in pealing forth the peals of Liberty. Called at the Telegraph Office and sent a communication of good morning & O.K. to friend Covel of N. Y. Purchased through tickets for Pittsburg, for $10, with the privilege of stoping on the rout as long as we pleased. At 2. P M. left in the steamer Cambridge & proceeded down the beautiful Delaware Bay, past Old Red Bank, where Greene defeated the Hessians & mortally wounded Count Donop; it is now in ruins; Fort Mifflin just below & opposite, is now the defense of Philadelphia, It is situated upon a low mud Island. We steamed it to Newcastle in Deleware 33 miles in 2 1/2 hours, having a heavy wind & rain on the passage, but it was all pleasant. As the excessive heat was very much modified by the same. At N. Castle we took the cars 16 miles across the little state to Frenchtown, Chesapeake Bay, near the mouth Elk River, here we again took a steamer for

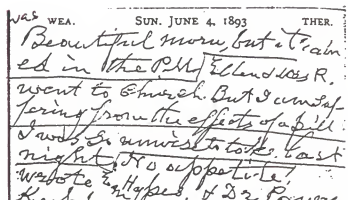
Baltimore 60 miles, arriving at 9 1/2 P.M. Held an animated conversation with a slaveholder & a sympathizer with the peculiar institution. Evidently they are ignorant of the true position of Northern Anti-slavery men. Myself & br' Denison, became quite interested in the family of a Mr Tillyard, consisting of himself & wife with 4 or 5 children; the oldest one, a young lady, some 17 years of age, was modest, good looking, a pleasing address & though a native of Baltimore, a good specimen of a worthy New England young lady. All the family were polite, & interesting; & this added much to the pleasuree of the moonlight voyage. There were many othere aboard not thus interesting, yet they were eubjecte of our private remarke & criticisms. The world was very well represented on this little boat.

We put up at the U. S. Hotel, one of the Grandee Hotels of the Nabobs! We were first shown to a room that did not at all suit ue & we descended baggage & negro waiter together to announce to the Landlord that we would look for quarters in some other Hotel. He apologized by eaying that we were sent by mistake to the wrong room; we accepted the explanation & were shown to a room every way desireable. One fault however we find with thie city, we were kept awake too much by the people turning night into day, & disturbing those who would gladly eleep.

11th Friday.

Rode 2 milee to Fort McHenry, the scene of a severe bombardment by the Brittieh Sept 13th 1814. It was gallantly defended by Col. Armistead, & the enemy were glad to retire. It mounte 50. cannon & at present hae a garrison of 70. Artillerymen, under Lieu. Col. Taylor. General Wallback also resides here. One of hie aids Major W W. Mackall, very politely invited us into his room & entertained us very agreeably for a half an hour in answering various questions on military affairs. He gave us a very concise analyeis of the character of General Worth, one of our most accomplished

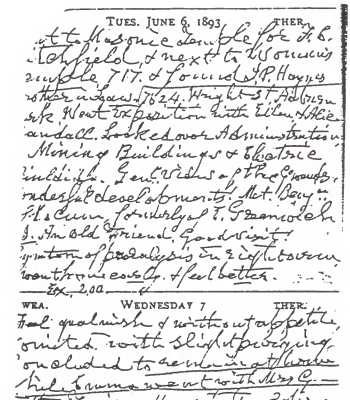
Appendix 10 -6-11



was WEA. SUN. JUNE 4. 1893 THER.
Beautiful morn, but I rained in the P.M. Ellen was R. went to Church. But I am suffering from the effects of a pill I took to remind to take last night. Rec'd a letter from Wabotie & Hayes & Dr Payne. Kept pretty quiet & a restless of the day. Am a little bit Grippish with spitting & vomiting

WEA. MONDAY 5 THER.
With Mrs. Rumsdell (went to the Exposition Kansas Building) Mass, Iowa French, Police, India, Transportation, Horticultural, Illinois. All very fine Kansas Am. well & Mt Sequoia, (Duchess) especially fine & Educational, State Historical Portraits very good. Long look for Gs and K. C. Litchfield in train. A great day's work but stood it & am as well as ever. Went to bed early & slept well.

Goodnow
June 4-11th, 1893



TUES. JUNE 6. 1893 THER.

...tte to Masonic temple for A. B. ...field, & next to Wonderly ...emble / 17. & found J.P. Hayes ...other and and 7 & 24. Wrought 3 F. Addresses ...ork. Went for preparation with Ellen & Alice ...andall. Looked over Administration ...Mining Buildings & theatre ...buildings. Fine views of the Grounds, ...ades & desolate ...ments. Met Boyce ...F. & Cunningham ...Wonderly of T. Diamond ...& Arnold friends. Good visit ...portation of paralysis in 2 instances ...countenance each. Feel better.

Exp. 2.00

WEA. WEDNESDAY 7 THER.

Had qualmish & vomiting attempted ...vomited with slight purging ...concluded to remain at home ...Ellen & Emma went with Mrs C. ...the Fair. Have to keep 3 doses ...during 4 hours 2 c.s Tinct. ...Belladonna & Calomel. Answered ...with invitation for her & Emma ...at dinner at 6. O'clock P. Sidney ...Pell. Read Alice's article on the ...Fair. First 2 of 12 Fellowships ...C. Litchfield at the Johns Hopkins ...conducted Edmund Quinn. 1.20

WEA. THUR. JUNE 8, 1893 THER.

Fine day Concluded not to go to the Faith to day. Dressed Edna to go out. The Flowers the Trees & Fields wonderfully Green to be pretty Careful. Read Ton y.w.! & not to stand. Wrote to Hattie & Symthia W. B. Wood & Gulaliasleep at Fair J.E.B. Pill. Visit on the Mrs. Randall Eve- with the whole family & Mr Matt Ramms & Chas. Hawens, Looked too much. Horse sore! Mc & To Bot Syringe Index R 150

WEA. FRIDAY. 9 THER.

Cool & some. F.E. visit. sick. very Talk Mc kept from Fair. Fine - Call from Mary E. Holcomb & Emma & Thomas. Rains Started Sun Fair & at home. Eve. 7-20 Have not been very well during the day. Thunder & Sqwe & Heated. P.C. to Mary A. Clark. Mrs Randall took back Water proof for Extension of the book.

SAT. JUNE 10, 1893 THER.

sunny day. Read the papers remained at home. Mabel went out to the Gubbers, All pretty quiet. Sent Tribune, Help-Jour to Uncle Frank D.S. Allen H.A. Parkerson & Susan A. Jenkins.

Seem to be spinning down hill.

When I first put up this morning took a round both. to almost off the night sweat & I think it did me good.

To bed early.

EA. SUNDAY 11 THER.

Ellen & Anna went to Church & I remained home. Read a little & wrote Sister Ann. Ann not very strong. Ellen is not brave in stand. Took 10 P. Humphreys Specific. to Mountain.

G W F

DIARY No. 51

Tuesday, 11-27-1928 continued

too, & it is nearly cleaned out.

Wednesday, 11-28-1928

Got my 3 cows from my shock corn E. of cabbage & drove 2 yearling steers of Joe Taylor from my shock corn (1) they were with or near my cows I crept back under a hole in the hedge, (2) I went back about noon or nearly noon, (3) somebody had chopped hedge limbs & put brush in the openings so I did not have much to do, but I cut some limbs & put in hole at end of my fence by Holladay's corn on my land, & looked along hedge to center of my 80 on E. side to Mr. Robertson's pasture-fence, & thot. it will turn stock. Hauled & stacked 2 loads hay from my W. prairie hay stack in about 3 hrs. P.M. A women came to my house while I was unloading hay & I saw her going back to the car. Dewey Akins said who wanted to sell bibles, & was at his place. Called on Ralph Robinson where he was plowing with a tractor & 2 gang plows, to see how it plowed; plows good, but is cold & stiff & I guess pulls hard. Ralph wanted me to donate some work on church addition, that they are building at W. Liberty.

Thursday, 11-29-1928

Husked about 200 lbs. corn from last pile (of 5 shocks) hauled up, & put in E. crib. Chased red steer of Taylors from my shock of feterita, by yelling at him & he ran back to hedge & crept thru where some brush had been put yesterday. I cut hedge limbs & put in holes & piled along hedge on E. side to cattle from coming thru. into my corn, kafir, & feterita shocks of grain & fodder. Ablue day & rained some, but not very cold. (1) Broke end off of my husking peg when trying to turn it to made a hook to hold the leather on end of peg (2) then spliced it with a spike hammered flat & 2 holes drilled thru it & riveted on old pge, then bent a hook on it (3) I have a new kind of husking peg invented & made & husked with it (4) it does pretty well, but the peg rolls in my hand, as it is only tied on with a piece of shoestring & w leather strips, one end of leather strip on hook near little finger = a new idea in husking (5)

Friday, 11-30-1928

Appendix 12

DIARY NO. 51 GWF-

Friday, 11-30-1928

Dewey Akin helped me 1 3/4 hrs. A.M. We repaired block & wired it on front bolster, under hay rack, to raise it, & hauled a load hay & balance of the W. this year stack of hay & topped to make a load & spread on E. end of plowing & some on popcorn stalks = 4 loads P.M. Dewey Akin came & I told him to go to the Dr. with his sore & swollen leg & he went to Dr. Rapp A.M. & came back again P.M. to help me haul hay, & it was cold cloudy & windy & he would like to haul coal, so I told him to go for coal, & I could use him hauling hay some other time. Husked 210 lbs. = 3 bu. corn & put in crib A.M. Have husked 45 bu. 62 lbs. from 28 shocks to date, this fall.

Wednesday, 12-5-1928

Cloyd Robertson came & borrowed my blow torch to warm manifold & carburator so he could start his engine in auto. I went up with him to see what I could learn. He & his mother wanted to go to Walker, Mo. where her husband is with his mother who had a stroke of apoplexy & Dr. has given her up. Coldest morning this fall & I suffered with cold hands & feet. Went to Dewey Akins & to Frank Allgoods. Lester said he would give me 6 cts. a bu. to husk my rent corn in his field on my farm. Nothing done but chores today.

Thursday, 12-6-1928

Dewey Akin came P.M. & rode with me to Mr. Joe Linn's, on the Mary Shade plow at the bridge N. of Henry Fairbanks & we bought some hardwood lumber & I hauled it home & got home at dark = 6:15 P.M. Not very cold, but I got cold coming home, & walked some, & Dewey drove my team. I bot. 2 paid $2.47 for lumber at 2½ cts. a foot,- except one plank for 50 cents, that would be 70 cts. @ 2½ cts. per foot. Dewey got about $1.50 worth of lumber = boards & scantling. My bill is as follows.-

1 Ps. 2 X 4 X 12 ft. - 8 ft.
1 Ps. 2 X 4 X 10 ft. = 7 ft.
12 Ps. 2 X 4 X 8 ft. = 64 inches
1 Plank 2 X 12 X 14 = 28 ft.
Check $2.47.

GWF -

Appendix 13

DIARY NO. 61

Monday, 7-24-1933

Mr. Stuart came to borrow a scythe but my syath was so weak that he feared he might break it, & did not take it. I gave him about a half pail of my early apples, as they are just getting good to eat & red colored. he told me they (someone) were pulling Frank Grubbs hedge. & I went to the cross roads 120 rods W. & saw 3 men pulling the hedge with a 65 horse power caterpillar tractor & about 25 feet of about 3/4 inch cable, (maybe larger) & a big hook about 1¼ inch thick & maybe about 8 inches long. One man ran the tractor & 2 men handled the cable & hedge. ahedge tree about 8 in. diameter made the tractor jerk to pull it as ground was soft & slippery. They put the cable around about 3 feet of row on hedge brush. about 3 or 4 men were working on the pulled hedge, chopping, sawing, and piling the brush. one small man told me his name it Pruitt and that he worked for Frank Grubb about 5 years ago & raised a crop for him. He talked of buying an engine to run a saw & may come to see my engine. Took 2 wired trees & broken off posts north side of grove & put the wires on posts I had set S. of the tree row. Then plowed nearly a rode with = 15 rounds on N. land of the 3 acres N. of slough from about 3:30 P.M. to nearly sundown = 3 hrs. or more, but it was warm & horses sweat & panted & I let them rest about half the time. Once the plow clogged bad & pulled my horses awful hard for a while. I plowed in prairie sod to get plow to scour & unclog the dirt & weeds that called it about 2 or 3 bu. pile so I could hardly have cleaned it out by hand without a spade. About 4 rods wide to plow in this land to finish this field. then I have 12 acres more of weeds to plow & 6⅔ acres oat stubble = 18½ acres to plow yet.

Tuesday, 7-25-1933

Finished plowing 3 acre patch N. of slough & plowed 3 rounds on 12 acre field. the weeds as as bad or worse than the 3 acre patch, & they got to

Appendix 14

Washington
Sunday...Sept.9.

Dear Everett:

I've just returned from the wars. The guns are silenced, the flags are furled, the weary soldiers turn their eyes longingly and expectantly to almost forgotten pleasures of home, of sweethearts and of bootleg liquor. In emulsion of thousands of equally obscure and unimportant participants in cataclysmic (look up the spelling of that word in the little book You carry) struggles of the past, I am hastening to record for posterity (No, I know you dont qualify under that classification, but please quit interrupting) my profound impressions of the dramatic incidents, outstanding characters, (except that this is not really an autobiography) and lasting lessons of the late conflict. Casting a calculating eye toward experiences of the past I feel that I am justified in hoping the the world will, momentarily at least, unsuspectingly measure the extent of my influence on the events of which I write by the spead with which I break into print.

Still mindful of the methods of my predecessors I must immediately, though of course modestly and reluctantly, confess that my intimate and continuous association with the principal figures of the war gave me "unusual and often unique opportunities to observe and perhaps even at times to infuence" the actions and decisions of leaders who the world already has come to recognize as men of destiny. Am I to be deterred by the fear of criticism from those mean spirited cynics who will suggest that an aide is only a tail to a cow.... or at the best nothing more than a visible warning to the meek and lowly that the brass hats are on the way? Ah, my friend, I need not say to you that the jibes and jeers of such can touch me not! Duty (hell I should have used capitals on that word) is to me a sacred thing.... the world shall not lose the message that only I can bring it. And besides, many times before now gullible publishers have paid handsomely for documents having no other claim to fame than the extravagant admiration of their authors. Yes, the path is plain before me; let fortune frown, let friends desert me, let the world condemn me, but I follow it to the end. (To be read in a low voice, somewhat tinged with melancholy.)

And so to work! Perhaps I should take time to say that in this magnus opus there shall be no hint of plagiarism; from my own mind and from my own inspired thoughts shall flow every phrase, idea and word that I here set down in my keen realization of profound obligation to my fellow men. Genius at work cannot of course pause to consider the probability that kindred spirits of the past may have used identical or strangely similar phraseology in the expression of burning inspiration. Indeed should this be cause for wonder? Rather should we not realize that,

cascading down from Olympian slopes, the molten lava of their genius must occasionally find eventual identity in form and shape even as it invariably does in beauty and in grandeur? Away then with all concern for the carping critic who finds in similarity of language evidence of feeble imitation! From these we find refuge in the nobility of our purpose and our self-dedication to its accomplishment.

There remains of course the possibility of challenge as to fact--- always we must realize that doubting Thomas did not depart this world with a consistent record for failure in procreation. His progeny plague us and insult us -- they laughed at Fulton; they imprisoned Bunyan; they burned Joan d'Arc, and they invented the Bronx cheer!!! I say to them in advance that their attacks against the product of my pen might, equal reason and presumption be directed against the works of some of my most illustrious predecessors--- to all of whom I unhesitatingly acknowledge that close kinship which their demonstrated genius so clearly indicates. But who, for instance, can take his oath that one man and one only was so rude as to draw aside his curtain when the beautiful Godiva rode so hopefully around the streets of Rome? What woman whose whose charm (and figure) had been so indifferently ignored by the whole manhood of a great city would have failed to leave for our edification an embittered and outraged commentary on the discernment and faded instincts of her male contemporaries? Preposterous? Of course. Yet the faithful historian could do no more than to record with precision and accuracy that which he himself saw, (And what a break it was to be an historian on that day and in that town.) Who can prove that the lovely Portia won her case solely by her knowledge of the law and her skill in debate? Would not an experienced judge have quickly penetrated her thin disguise and by an exchange of winks assured her client of acquittal and himself of a date --- regardless of the logic of her argument? Sticklers for petty facts in Moses' day undoubtedly asserted that his flight from Egypt was inspired more by his fear of a shot-gun wedding than by his unalterable determination to give the Isrealites a swim in the Red Sea. And from what we know of the habits of the Pharohettes, we are constrained

to acknowledge the plausibility of this contention. The lesson is that fact and history are not necessarily synonomous terms- the artist is not to be confused with the statistician. Now the task I have set for myself is writing the history of the great Blue-Black and Tan War of 1934, and of myown participation therein. Why should I quake in terror of anticipated attacks from those who will try to confound me with facts? The most they will be able to prove is that my participation was nil, that there were no Blues, nor Blacks, nor Tans, and that in truth there was no war. ✓

****

What on earth has happened to you and Kate? We've constantly been expecting to see you drop in here if forno other reason than to thumb your noses at us. Ireturned from Raritan last eve and we were so concerned as to your undetermined fate that we agreed to mount the Plymouth this morning and play Stanley to your Livingstone. We failed to do so only because ~~xxxix~~ we were afraid you'd be off on some jaunt and we'd get neither a drink nor a feed to help us on the return journey. Since we are expecting John by next Saturday we are toying with the idea of running up there one afternoon this week and staying over the next day. That would compel me to take only one day off, which I could manage I think,. This subtle hint for an invitation is not nearly so plain as I could make it.... but having implicit faith in your mental alertness and fine discernment, I am putting it this way in complete confidence that you will not miss the point. But of course, as long as things are hinted at, one can always conveniently duck disagreeable prospects by assumed denseness. And no umbrage can be taken by the hinter!

Love to you both and for cripes sake come on in and see us,

As ever,

JbL

75

January 3, 1939

Dear Milton:

Your letter of December 13 just arrived, and I'm dropping everything in order to get off a reply by the next clipper to leave here. In attempting to measure the attractiveness of the offer made you by Penn State, I am assuming that, by custom in United States Colleges, the summary or arbitrary removal from office of a College Dean is practically impossible. In other words security--by which I mean your family's security--would be enhanced rather than diminished by the change. This is vastly important to a salaried man that has to think of a wife and two young children, and all observations I shall attempt to make below are dependent upon the validity of this basic assumption.

I am quoting a sentence from your letter. "Finally, I am not certain that I would be entirely happy in work that lacked the rigorous demands on many fronts that I encounter here."

I feel competent to enter a discussion on this point because of similar feelings of my own in the past, and some reflection on the results of my own decisions, that were based upon those feelings. The human machine wears out, although none of us ever applies this inescapable law to his own case. Deterioration and destruction are familiar phenomena, but the mind recoils from personal application of the logical conclusion. Signs of deterioration appear, just as they do in an automobile, in accordance with the speed of use. By tradition, when we speak of burning ~~the candle at both ends~~ we think of strong drink, weak women and rancous singing. Actually the speed that is most dangerous to the human is the speed that is involved in driving, continuous mental endeavor. Men of ability in the government service see so much to be done, they create or have created for them so many jobs that dazier men like to shunt from their own shoulders (except of course when it comes to collecting the glory for recognized accomplishment) that gradually the victim, which word I use advisedly, loses his sense of values, and with this needful governors failing him, he applies his mind, consciously and unconsciously, day and night, to important and intricate problems that march up ceaselessly, one after the other, for consideration.

In our younger days this is fine--we like it--we know with certainty that we are important to the organization we serve--and we thrive on the completion of each job, done to the full satisfaction of those around and above us. It can likewise be done and enjoyed by age with no great damage, but only where the conditions of service are such as to encourage, even force, increasing periods of enjoyable relaxation. To pursue further the automobile analogy; an old car must go for complete overhaul more frequently than the new one!

Most professional careers, even including the military, so arrange themselves that increasing opportunity to slow up in personal

effort, to use the fruits of other men's work in arriving at decisions and judgments, come with advancing years. A disadvantage that I've always suspected to exist in your present job is that this general rule does not apply. Secretaries and Assistant Secretaries will continue to come and go--and the able, conscientious Bureau Director, capable of taking on his own shoulders the thousand and one recurring administrative, coordinating and miscellaneous jobs will be scarce as ever. In other words, you, because of your nature and your recognized abilities, will be on a steady, swift grind until you've definitely damaged your own capacity for enjoying life. When tires blow out or pistons freeze the car is no good to anyone-- but these things are more readily repaired than a shattered nervous system, or a confirmed routine of activity that finally cannot be broken except at the acute distress and damage of the individual. When this occurs real unhappiness results--for only a man that is happy in his work can be happy in his home and with his friends. Which, incidentally, leads to the observation that Helen, in collaborating with you in solving your present problem, should do so with the purpose of insuring the suitability, congeniality and interest of your life-work.

All this to pose one single proposition! My conception of a worthwhile College Dean is a man that, as years go by, becomes a guide and inspiration to our youth, not through feverish activity and solution of involved administrative problems, but through the ripened viewpoint from which he sees youth's questions, and the high average of wisdom and leadership he uses in helping them solve their problems. His value derives from character, knowledge and personality--not from ceaseless expenditure of nervous energy. Of course I realize that in entering upon a new post of this kind, a season of intensive effort would be necessary. But if the picture presented in this paragraph is reasonably accurate, the new job would appear to be one in which the demands conform closely to the proper output of ripening ability, while in your present position, I feel, this characteristic is lacking, and you are in danger of becoming only an extremely useful tool! In other words, is not Tom Lee prompt to [illegible] as offered a favorable opportunity?

This seemingly endless discussion of trite but nevertheless sound truisms may bore you--but if you've read to this point, you've at least been reminded of the most important point you and Helen must now consider--your future happiness in your work. Happiness in work means that its performer must know it to be worthwhile; suited to his temperament, and, finally, suited to his age, experience, and capacity for performance of a high order.

As to your house. On this point all I can give is my assurance that I understand, and sympathize with your reactions. It is a real home, instantly sensed by even a casual visitor. To sell it will be to lose something valuable from your life, because you two have put so much of yourselves into it. The money loss would not concern me much, but your abandonment of past plans and hopes and effort will cause even me a wrench, so I know what it must mean to you. But why not take a run up to Pennsylvania to determine whether the general setting and atmosphere is one to which you can transplant your ideas in home-building, even if you cannot take there

your present shrubs, trees, stairways and vistas? The problem might solve itself through discovery of newly inspired anticipations.

One last thought occurs to me as very important. How about freedom in self-expression? The prohibitions, legal and ethical, surrounding the public servant might be largely removed in a position of the kind you are considering. If so I would regard this as a tremendous advantage. With your ability in composition, particularly in expository writing, and your wealth of experience in agricultural problem, you should have liberty and leisure to put down and publish what you believe, not what administration policy supports. With such opportunity presented you, I tell you, without flattery, that there is no reason you should not become a national figure in that field. You are honest, intelligent, natural, well informed, and you can express yourself clearly. Nothing else, it seems to me, is necessary particularly when the position you will occupy tends to make your words authoritative in the ears of the public.

Well, I've had my say. As you can see, I've argued myself into believing you should make the change,--provided the various assumptions I've necessarily had to substitute for actual knowledge, are correct. At least Mamie and I want you and Helen to know we'll be thinking of you, and, in spite of your own doubts, we'll believe that whatever decision you make will be the right one. With best wishes for 1939 to you, Helen, Buddy and Mistress Ruth.

As ever,

P.S. Mamie has read your letter and this reply. Her appended note gives her slant on the matter.

CHANGES IN LEFT- AND RIGHT-BRANCHING SENTENCE EMBEDDING IN ADULTS

by

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ABSTRACT

Recent studies have indicated that sentence complexity in adults as measured by the frequency of left and right branching sentence embedding in their writing declines with age. The number of left branching embeddings in particular seems to reflect a decline in verbal and associated cognitive abilities with age.

Earlier researchers have generally held that verbal abilities are fairly stable across the life span and in some cases actually improve.

The present study consists of a cross-sectional examination of adult writing samples of a nearly uniform length. Adults involved in the study ranged in age from the early twenties to the early nineties. A longitudinal component examines selected writings from four individuals whose papers, journals, or diaries contain writing samples covering fifty or more years of their lives. The primary thrust of this study is to determine the frequency of left and right branching embeddings as related to age.